UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Rey 1450

P O Box 1450 Alexandria, Virgima 22313-1450

## NOTICE OF ALLOWANCE AND FEE(S) DUE

25944 7590 11/24/2009

OLIFF & BERRIDGE, PLC P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER
COHEN, STEFANIE J

ART UNIT PAPER NUMBER

1793

DATE MAILED: 11/24/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588.603	08/07/2006	Takeshi Hirabayashi	128996	9553

TITLE OF INVENTION: EXHAUST GAS PURIFYING CATALYST, METAL OXIDE PARTICLE AND PRODUCTION PROCESS THEREOF

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	02/24/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THE APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and I/2 the ISSUE FIEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

#### PART B - FEE(S) TRANSMITTAL

# Complete and send this form, together with applicable fee(s), to: Mail Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where

appropriate. All further indicated unless correcte maintenance fee notifical	ed below or directed oth	ng the Patent, advance on nerwise in Block 1, by (a	rders and notification a) specifying a new co	of maintenance fees rrespondence address	will be ; and/o	mailed to the current r (b) indicating a sep	correspondence ad arate "FEE ADDRE	dress as
CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)				Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.				
OLIFF & BER P.O. BOX 32085 ALEXANDRIA		/2009		Ce hereby certify that t states Postal Service iddressed to the Ma ransmitted to the USI	rtificate his Fee( with sur II Stop TO (57	e of Mailing or Trans (s) Transmittal is bein fficient postage for fir ISSUE FEE address (1) 273-2885, on the c	mission g deposited with the st class mail in an e above, or being fa ate indicated below.	United nvelope acsimile
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								(Date)
APPLICATION NO.	FILING DATE		FIRST NAMED INVENT	OR	ATTC	RNEY DOCKET NO.	CONFIRMATION	NO.
10/588,603 TITLE OF INVENTION	08/07/2006 EXHAUST GAS PUR	FYING CATALYST, M	Takeshi Hirabayash ETAL OXIDE PARTI		IION P	128996 ROCESS THEREOF	9553	
APPLN, TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE D	E PREV. PAID ISSU	E FEE	TOTAL FEE(S) DUE	DATE DUE	3
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4a. The following fee(s) are submitted:    Issue Fee   Archive Fee(s): (Please first reapply any previously paid issue fee shown above)   A check is enclosed.   Publication Fee (No small entity discount permitted)   Advance Order - # of Copies   Publication Fee (No small entity discount permitted)   The Director is hereby authorized to charge the required fee(s), any deficiency, or red it accordance for the Director is hereby authorized to charge the required fee(s), any deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), any deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), any deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), any deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), any deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), any deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), any deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), any deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), any deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), any deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), any deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), any deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), and deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), and deficiency or red it accordance for the Director is hereby authorized to charge the required fee(s), and deficiency or red it accordance for the red it accordance for the Director is hereby authorized to c					ny form).			
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NOTE: The Issue Fee and interest as shown by the	d Publication Fee (if req records of the United Sta	uired) will not be accepte tes Patent and Trademark	d from anyone other the Office.	in the applicant; a reg	istered	attorney or agent; or t	ne assignee or other	party in
Authorized Signature	Authorized Signature Date							
Typed or printed name			Registration No.					
This collection of inform an application. Confident submitting the complete this form and/or suggesti Box 1450, Alexandria, V Alexandria, Virginia 223	ation is required by 37 C tiality is governed by 35 d application form to the ions for reducing this but firginia 22313-1450. DC 13-1450.	FR 1.311. The informatic U.S.C. 122 and 37 CFR USPTO. Time will vary rden, should be sent to the ONOT SEND FEES OR	on is required to obtain 1.14. This collection is depending upon the in e Chief Information Of COMPLETED FORMS	or retain a benefit by estimated to take 12 idividual case. Any c ficer, U.S. Patent and TO THIS ADDRES	the pub minute ommen Trader S. SEN	lic which is to file (an s to complete, includi ts on the amount of ti nark Office, U.S. Dep D TO: Commissioner	d by the USPTO to p ng gathering, prepari me you require to co artment of Commer for Patents, P.O. Bo	process) ing, and omplete ce, P.O. ox 1450,

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PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.



## UNITED STATES PATENT AND TRADEMARK OFFICE

#### UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/588,603 08/07/2006		Takeshi Hirabayashi	128996 9553		
25944 75	590 11/24/2009		EXAM	IINER	
OLIFF & BERRIDGE, PLC		COHEN, STEFANIE J			
P.O. BOX 320850 ALEXANDRIA, VA 22320-4850			ART UNIT PAPER NUMBER		
			1793		

DATE MAILED: 11/24/2009

# Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 233 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 233 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

# Notice of Allowability

Application No.	Applicant(s)	
10/588,603	HIRABAYASHI ET /	AL.
Examiner	Art Unit	
STEFANIE COHEN	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address-All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included
herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS
NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative
of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- This communication is responsive to 9/17/2009.
- The allowed claim(s) is/are 7, 9-11.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some\* c) None of the:
    - 1. A Certified copies of the priority documents have been received.
    - 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
    - Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- 5. CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) hereto or 2) to Paper No./Mail Date
    - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. Notice of Draftperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 8/13/2009, 9/17/2009
- Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5. ☐ Notice of Informal Patent Application
   6. ☐ Interview Summary (PTO-413),
- Paper No./Mail Date .
- 7. Examiner's Amendment/Comment
- 8. X Examiner's Statement of Reasons for Allowance
- 9. 🔲 Other \_\_\_

Application/Control Number: 10/588,603

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The following is an examiner's statement of reasons for allowance:

Although Yoshida teaches a method of producing a heat resistant catalyst support, Yoshida does not teach a method of making a catalyst involving isoelectric points of each compound.

Although Wachter teaches a method of manufacturing a fluid catalytic catalyst, Wachter does not teach preparing a solution containing a ceria sol and a sol of at least either one of alumina and silica wherein the isoelectric point of the ceria sol differs more than 3.5 from that of said at least one of alumina and silica sol.

Further, Wachter teaches the components have their isoelectric points matched before they are combined in solution and fails to have sols with isoelectric points that differ by more than 3.5.

Further, EP0524643, FR2836067, EP1175935, EP0430744 and US5439865 as documented on the search report do not teach preparing a solution containing a ceria sol and a sol of at least either one of alumina and silica wherein the isoelectric point of the ceria sol differs more than 3.5 from that of said at least one of alumina and silica sol.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should Application/Control Number: 10/588,603

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preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEFANIE COHEN whose telephone number is (571)270-5836. The examiner can normally be reached on Monday through Thursday 9:3am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Melvin Curtis Mayes can be reached on 5712721234. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Stefanie Cohen 11/17/2009

SC

November 19, 2009

/Melvin Curtis Mayes/ Supervisory Patent Examiner, Art Unit 1793